V. State Water Quality Standards-Related Issues

Response #V.1-8	**Document #**: 1218

1. Comment
PG&E-NEG stated that the Administrative Record does not indicate that EPA "formally established water quality-based limits in the draft permit or that such limits formed the basis for the final limits Region 1 selected." The permittee also states that EPA "has not placed in its Administrative Record the basis for its selection of water quality-based standards." The permittee also complained that there have been delays in its receipt of the complete State Administrative Record from the MA DEP and "[a]s a result, BPS reserves its right to submit comments on this aspect of the draft permit pending a meaningful opportunity to review the complete Administrative Record."

Response
This comment is responded to elsewhere in this document. In addition, the permit's thermal discharge limits were, and are, actually based on a CWA § 316(a) variance rather than on water quality standards. The permit's cooling water intake capacity limits are based on CWA § 316(b), though EPA has also determined that these limits cannot be made significantly less stringent due to state water quality requirements.

2. Comment
The permittee stated that if EPA decides to grant "alternative thermal limits under Section 316(a) . . . a state is not entitled to withhold certification or to insist on the application of limits more stringent than those determined under Section 316(a)." (FHE, Att. 4, p. 10, item 2)

Response
The Commonwealth of Massachusetts **has** certified EPA's NPDES permit for BPS under CWA § 401, including the permit's thermal discharge limitations developed under CWA § 316(a). Therefore, the legal issue posed by the permittee—i.e., that a § 316(a) thermal discharge variance "trumps" State certification requirements for thermal discharges—does not need to be addressed or resolved here.

While the above is sufficient for the BPS permit development process, EPA wishes to state that it does not agree that the legal issue addressed in the comment is clearly decided in the manner suggested by the permittee.

3. Comment
PG&E-NEG states that EPA is incorrect as a matter of law when the Agency "states that 'Congress clearly stated even for downstream affected states—which do not have direct certification authority . . . —if permit conditions cannot be developed to insure compliance with the downstream state's standards, then no permit may be issued.'" The permittee argues that EPA ignores the case of *Arkansas* v. *Oklahoma*, 503 U.S. 91, 111 (1992), which the permittee states "confirm[s] that downstream states do not have veto authority over discharges in other states." (FHE, p. 10, item 3)

Response
EPA believes that it has properly discussed and interpreted CWA § 401(a)(2) and that its reading is supported by the Supreme Court's interpretation of the provision in *Arkansas* v. *Oklahoma*, 503 U.S. 91 (1992). See also *In re City of Moscow, Idaho*, 2001 EPA App. LEXIS 12 (July 27, 2001) (NPDES Appeal No. 00-10), n. 58 and p. 76. See Chapter 5 of EPA's July 22, 2002, Permit Determinations Document and discussion elsewhere in this document. EPA also has not offered the downstream State in this case, Rhode Island, "veto" power over the permit.

4. Comment

PG&E-NEG stated that it disagrees with MA DEP's "proposed mixing zone," but is "reserving its detailed comments on the mixing zone proposal." The permittee gives several reasons for withholding its comments on the mixing zone. First, according to the permittee, the State's proposal "does not represent MADEP's final position as to the mixing zone that would actually be applied to BPS." The permittee also complained of delays in the State's providing "access to the [State's] administrative record supporting this proposal . . . [noting that a] portion of that record was made available to BPS less than a week before the comments were due and BPS has been notified that the remainder will not be available for some time." In addition, according to the permittee, EPA "has not chosen to rely on the MADEP recommendation as the basis for its [thermal discharge limit] proposal." The permittee stated that it "will submit its comments on the mixing zone proposal once it has been given a reasonable opportunity to review the administrative record on which it is based." (FHE, Att. 4, p. 32, item 1)

Response

EPA agrees that the permit's thermal discharge limits are not founded on the mixing zone-based water quality standards analysis prepared by MA DEP. The thermal discharge limits were, instead, based on a CWA § 316(a) variance. In addition, EPA recognizes that there is no requirement that a permittee provide comments on **any** aspect of a Draft NPDES Permit and the company is free not to file comments regarding the MA DEP's mixing zone analysis in this case.

EPA does not agree, however, that the permittee can necessarily provide comments later to EPA regarding that analysis. EPA provided a detailed explanation of its application of water quality standards in Chapters 5 and 8 of EPA's *Clean Water Act NPDES Permitting Determinations for Thermal Discharge and Cooling Water Intake from Brayton Point Station in Somerset, MA (July 22, 2002)* (EPA's July 22, 2002, Permit Determinations Document). In addition, MA DEP's mixing zone analysis was incorporated as Appendix A to the document. This provided a more than adequate basis for the permittee to comment to EPA during the public comment period regarding the water quality standards and the State's mixing zone analysis. Essentially, the only substantive comment provided by the permittee on this topic during the comment period, or since, is the unsupported, conclusory statement that it disagrees with the State's mixing zone.

With respect to the permittee's complaint that the State has not provided an adequate Administrative Record to the permittee regarding the mixing zone, that is a State law issue between the permittee and the State. For its part, EPA has provided an adequate record regarding the Federal permit and the permittee should have filed any comments it had on that record during the comment period.

5. Comment

The MA DEP, the RI DEM, the MA Division of Marine Fisheries (MA DMF), and the MA CZM Office all provided EPA with written comments and analyses in response to PG&E-NEG's Final CWA §§ 316(a) and (b) Demonstration Documents (December 2001). EPA attached the major submissions from the States as a group in Appendix B to EPA's Permit Determinations Document. PG&E-NEG has provided a number of comments on the submissions by the States.

Response

EPA appreciates that the permittee has provided comments on the various State submissions mentioned above, and the Agency has considered those comments. At the same time, EPA needs to respond only to comments on the basis for its Draft Permit. Therefore, although EPA has considered the permittee's comments regarding the various State documents, the Agency is not providing specific responses to each of these comments on analyses by the States. Instead, EPA is responding to comments on the basis for its permit. To the extent that EPA has based its permit on some aspect of one of the State analyses and the permittee has commented on that point, EPA has responded to it.

To the extent that the permittee wants direct responses to its specific comments on the States' analyses regardless of whether they are part of the basis of EPA's permit, the permittee should seek such responses from the relevant State agency. Because it was unclear from the permittee's submission as to whether it had sent its comments on the State documents to the relevant State agencies, EPA has forwarded these comments to the States for their consideration and response as they deem appropriate.

6. Comment

The permittee stated that for this permit, thermal discharge limits that would "otherwise" apply in the absence of limits based on a CWA § 316(a) variance are technology-based limits based on a the application of the BAT standard. Specifically, the permittee point to the 0.8 TBtu annual heat load limit and the 85 °F maximum temperature limit stated at pp. 8-2 to 8-3 of EPA's Permit Determination Document. The permittee further stated that there is no indication that EPA established any water quality standards-based limits. According to the permittee, although the MA DEP provided EPA with a potential mixing zone for thermal discharge limits, EPA did not use it to develop actual thermal discharge limits. PG&E-NEG argued that if EPA later tries to adopt this mixing zone as the basis for thermal discharge limits, EPA's Administrative Record does not identify "the basis for its selection of water quality-based standards." Moreover, PG&E-NEG stated that it had not yet been given the MA DEP's complete Administrative Record and that, therefore, it "reserves its rights" to submit additional comments on this aspect of the Draft Permit after "a meaningful opportunity to review the complete Administrative Record.

Response

In the absence of limits based on a CWA § 316(a) variance, the permit's thermal discharge limits would be based on the more stringent of the technology-based and water quality-based requirements in accordance with CWA § 301. See §§ 4.1, 4.2.1, 5.2, and 8.1 of *EPA's Clean Water Act NPDES Permitting Determinations for Thermal Discharge and Cooling Water Intake from BPS in Somerset, MA (July 22, 2002)* (EPA's July 22, 2002, Permit Determinations Document). The permittee is correct that EPA determined technology-based thermal discharge limits based on application of the BAT standard. See *Id*. at § 8.1.1. The permittee is incorrect, however, in stating that EPA did not identify permit conditions based on State water quality standards or a basis for such limits.

EPA **did** identify, and explain the basis for, permit limitations based on State water quality standards. These limitations were based on a mixing zone analysis by the Commonwealth of Massachusetts. Because the power plant's thermal discharge also affects Rhode Island's water quality, Massachusetts also coordinated with Rhode Island concerning the development of the mixing zone. This mixing zone evaluation is included as Appendix A to, and is discussed in Chapter 5 of, EPA's July 22, 2002, Permit Determinations Document. In addition, EPA identified thermal discharge permit requirements that would have been based on the Massachusetts mixing zone in Section 8.1.2 of EPA's July 22, 2002, Permit Determinations Document. As stated above, the technology- and water quality-based conditions would be combined so that in the event of any difference between the two sets of requirements, the more stringent aspect of each would apply.

The permittee also argued that if the permit was to include limits based on the State's mixing zone analysis, it reserves the right to file additional comments after a meaningful opportunity to review the complete administrative record from the State. EPA disagrees that the permittee is entitled to additional formal opportunity for public comment on the NPDES permit on this basis. First, the permit's thermal discharge limits are based on a CWA § 316(a) variance rather than the Massachusetts mixing zone. Second, even if EPA's thermal discharge limits had been based on the State's water quality standards, the permittee has had a more than adequate opportunity to comment on the basis of **EPA's** determination of State water quality-based limits for thermal discharges based on the application of Massachusetts' water quality standards. Third, if any water quality-based thermal discharge limits ended up being based on state water quality certification conditions, under applicable law those limits would need to be appealed to

the State. Fourth, flaws in **the State's** administrative record, if any, do not constitute flaws in **EPA's** administrative record. Moreover, the permittee must address its concerns about the State's administrative record with the State (see AR 3021).

7. Comment

PG&E-NEG stated that CWA § 303(g) means that "alternative" thermal discharge limitations based on a CWA § 316(a) variance "would supplant any more stringent limitations on heat that might be imposed based on State water quality standards." The permittee further stated that a CWA § 316(a) variance would "displace state water quality standards." Citing p. 8-3 of EPA's Determinations Document, the permittee also stated that EPA does not appear to dispute this. The permittee complains, however, that the discussion of water quality standards in Chapter 5 of EPA's Permit Determinations Document contains "several misleading statements" regarding the role of Massachusetts', and Rhode Island's water quality standards in development of a permit for BPS. PG&E-NEG stated that it is "well established as a legal matter that, if alternative limits under Section 316(a) are granted, a state is not entitled to withhold certification, Determination, p. 5-5, or to insist on the application of limits more stringent than those determined under Section 316(a), Determination, p. 5-9."

Response

The permittee has argued at some length in its comments that where EPA proposes to issue an NPDES permit with thermal discharge limits based on a CWA § 316(a) variance, States have no authority based on State law requirements to deny certification or impose more stringent thermal discharge conditions in a § 401 certification. EPA has carefully considered the permittee's arguments and must disagree that the legal issue is "well established" in the manner asserted by the permittee. EPA understands the permittee's arguments but believes that a number of other arguments support a conclusion contrary to that urged by the permittee. Thus, EPA believes the answer to the question is unclear.

There is no need, however, to resolve this issue for the BPS permit; therefore, EPA declines to do so. This legal issue would require resolution for this permit only if the State were denying certification, or imposing more stringent certification conditions, so as to bar the thermal discharge limitations proposed by EPA on the basis of a § 316(a) variance. In this case, the State has taken neither of these actions. Instead, Massachusetts has certified the permit, including the § 316(a) variance-based thermal discharge limits, under CWA § 401(a)(1).

8. Comment

PG&E-NEG stated that a downstream State whose waters would be affected by a discharge is not authorized to "veto" an NPDES permit on the grounds that it believes the discharge will cause violations of its water quality standards.

Response

EPA agrees that CWA § 401(a)(2) does not authorize a "downstream state" to "veto" NPDES permits that it believes may cause a violation of its water quality standards. EPA never stated that it did. See § 5.2 of EPA's July 22, 2002, Permit Determinations Document. At the same time, however, Congress expressly dictates in CWA § 401(a)(2) that EPA may not issue, or allow an "upstream State" to issue, a permit allowing discharges resulting in violations of the downstream State's water quality standards. The statute also directs EPA to at least consider the views of the downstream State concerning whether the permit will result in violations of the State's standards. If EPA agrees that a permit would cause such violations, it cannot issue the permit until changes have been made that will correct the violations. If EPA disagrees, it would issue the permit, and the downstream State could decide whether to appeal the permit. The Supreme Court's decision in *Arkansas* v. *Oklahoma*, 503 US 91, at 111 (1992), is consistent with this understanding of the requirements of CWA § 401(a)(2).

Response #V.9-11	**Document #**: 1132, 1133, 1150, 1175

9. Comment
One commenter stated that under CWA § 401, in order for the permittee to receive a NPDES permit, (1)Massachusetts must issue a water quality certification, and (2) Rhode Island, as the downstream state, also may insist that its water quality standards are complied with. The commenter supported EPA's determination that only closed-cycle cooling for the entire facility would satisfy both states' standards. (1133)

Response
I. Introduction

The proper application of State water quality standards and other State law requirements to thermal discharge and cooling water intake limitations is complicated and was discussed in detail in Chapter 5 and §§ 6.2 and 7.2.9 of EPA's July 22, 2002, Permit Determinations Document. Nevertheless, further discussion is appropriate in response to comments.

As a general matter, the CWA requires NPDES permit limitations to be based on whichever is more stringent between Federal technology-based and State water quality standards-based (or other State law requirement-based) conditions. See, e.g., 33 U.S.C. § 1311(b)(1)(C). The CWA also generally allows State law requirements to be **more** stringent than the minimum Federal requirements. See, e.g., 33 U.S.C. § 1370.

II. State in Which the Permitted Facility is Located.

Turning first to the State in which the permitted facility is located, under the CWA § 401 Certification process, this State may require a federal permit to include limitations based on its water quality standards or other State law requirements. CWA § 401(a)(1) provides, in pertinent part, that:

> …[n]o license or permit shall be granted until the certification required by this section has been obtained or has been waived as provided in the preceding sentence. No license or permit shall be granted if certification has been denied by the State ….

33 U.S.C. § 1341(a)(1). In addition, CWA § 401(d) specifies that:

> [a]ny certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any application for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title… and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section.

33 U.S.C. § 1341(d). Thus, the plain language of the statute indicates that EPA could not issue an NPDES permit in the face of a State denial of certification, and that an EPA NPDES permit must include any conditions required by the State's certification. See also 40 C.F.R. §§ 124.55(a)(1) and (2).

The State does not, however, **have to** issue a CWA § 401 certification. The statute plainly indicates that a State can also either "waive" or deny certification. 33 U.S.C. § 1341(a)(1). See also 40 CFR §§ 124.53(a). Regardless of what the State does, EPA has an independent obligation under CWA § 301(b)(1)(C) to

ensure that the permit limits it issues satisfy any more stringent state requirement based on water quality standards or other applicable State law requirements. See also 40 CFR § 122.44(d)(5).

III. "Downstream Affected State"

Turning next to States other than the one in which the permitted facility is located, but whose water quality is nevertheless affected by the facility (i.e., a "downstream affected State"), such States do not have authority to issue (or deny) water quality certifications for permits issued under the CWA. **Compare** 33 U.S.C. § 1341(a)(1), **with** § 1341(a)(2). Instead, under CWA § 401(a)(2), a downstream affected State may assess the effect of the permit on its water quality, raise objections to the permit, and request a public hearing. 33 U.S.C. § 1341(a)(2). While the powers of the downstream affected state are limited in this manner, the statute nevertheless requires the permitting agency itself to "condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements [in the downstream affected state]." Id. Indeed, CWA § 401(a)(2) further states that "[i]f the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit." Id. See also 40 CFR § 122.44(d)(4).

Thus, the downstream affected state cannot itself directly impose permit conditions based on its water quality requirements through the § 401 certification process. It can only make its views known and potentially request a hearing regarding the permit conditions necessary to ensure compliance with its water quality requirements. The permitting agency, however, is required to determine what permit limitations are necessary to satisfy the water quality requirements of the downstream affected State and to include such limitations in the permit. If the downstream affected State believes that the permit fails to include such requirements, then it may appeal the permit (like any other interested person with proper standing).

IV. State Water Quality Requirements and Cooling Water Intake-Related Limitations.

As EPA explained in some detail in the July 22, 2002, Permit Determinations Document, see §§ 7.2.9 and 5.2, the NPDES permit's requirements pertaining to CWISs under CWA § 316(b) must not only comply with EPA technology standard determinations, but also must comply with any more stringent, applicable State legal requirements, including water quality standards. See also 66 Fed. Reg. 65277 - 78 (Dec. 18, 2001) (EPA preamble for Final Phase I CWA § 316(b) Regulations).[1]

This is consistent with the terms of CWA §§ 510, 401, and 301(b)(1)(C) and the statutory purpose expressed in CWA §§ 101(a) and (b). These provisions indicate that Congress intended to preserve the States' authority to impose requirements more (but not less) stringent than federal technology standards if they so choose to protect their water quality. See, e.g., *PUD No. 1 of Jefferson County* v. *Washington Department of Ecology*, 511 U.S. 700, 705 (1994); *Arkansas* v. *Oklahoma*, 503 U.S. 91, 107 (1992).

To begin with, CWA § 101(a) declares that the CWA's objective is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters,'' while § 101(a)(2) states that to achieve this objective, "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the

[1] Please note that EPA is well aware that the Phase I CWA § 316(b) regulations apply to "new facilities" and do **not** apply to BPS, which is an "existing facility." We are not suggesting that the requirements of the Phase I regulations actually apply to BPS. We only point to the legal analysis in the preamble to the Phase I regulations to show that it is consistent with the Region's conclusion that cooling water intake structure requirements must comply with any more stringent applicable State water quality requirement as well as minimum Federal technology standards.

water be achieved by July 1, 1983 . . . " This indicates that the protection of fish and other aquatic life was one of Congress's major goals in enacting the CWA.

CWA § 101(b) states that "[i]t is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution [and] to plan the development and use (including restoration, preservation, and enhancement) of . . . water resources . . .'' 33 U.S.C. §§ 1251 (introductory paragraph), (a) (1) and (2), and (b). Furthermore, CWA § 510 provides, in pertinent part, that:

> [e]xcept as provided in this Chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof… to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation,… prohibition,… or standard of performance is in effect under this chapter, such State… may not adopt or enforce any effluent limitation, or other limitation,… or standard of performance which is less stringent than the effluent limitation, or other limitation,… prohibition,… or standard of performance under this chapter… .

This statutory provision clearly dictates that States are free to regulate pollution and associated effects and activities as they see fit, except that they cannot impose less stringent conditions than would be required by Federal law. The only exception, as indicated in the opening clause of § 510, would be if the CWA expressly provided that it preempted State law in a particular area. There is no such express preemption of State requirements that might be applicable to cooling water intake limitations. In other words, nothing in the statute purports to prohibit the application of State water quality requirements to cooling water intake permit limitations.

Moreover, CWA § 510 can be read to indicate **expressly** that State law requirements may address cooling water intake restrictions and be more stringent than federal requirements. While CWA § 510(1)(A) refers to effluent discharge limits, § 510(1)(B) refers to other types of requirements "respecting control or abatement of pollution." Later in the text, § 510 distinguishes an "effluent limitation" from an "other limitation, . . . prohibition, . . . or standard of performance." Cooling water intake limitations would fall within the category of other limitations, prohibitions, or standards of performance. Indeed, the Federal courts have expressly held that CWA § 316(b)-based cooling water intake limitations are "other limitations" under CWA §§ 301 and 306. *Virginia Elect. & Power Co.* v. *Costle*, 566 F.2d 446, 450 (4th Cir. 1977) ("we think a regulation implementing the requirements of § 316(b) must qualify as an 'other limitation' [under §§ 301 and 306]"); *Cronin* v. *Browner*, 898 F.Supp. 1052, 1058 (S.D.N.Y. 1995) ("regulation under section 316(b) constitutes the issuance of an 'other limitation' under sections 301 and 306"). See also PUD No. 1, 511 U.S. at 711-12 (Supreme Court concludes that minimum in-stream flow requirements are "other limitations" under the CWA). Thus, CWA § 510 can be read to indicate expressly that State law requirements may address cooling water intake restrictions and be more stringent than Federal requirements.

Consistent with this reading of the statute, the Supreme Court has also made clear that CWA § 401 applies to more than just "discharges" of pollutants. The Court explained in PUD No. 1, 511 U.S. at 711-12, that while there must be a "discharge" in order to trigger application of the State certification provisions of CWA § 401(a)(1), CWA § 401(d) and EPA regulations at 40 C.F.R. § 121.2(a)(3) authorize State certification conditions to be placed on the permit applicant's **activity as a whole** so as to ensure compliance with any applicable "effluent limitations and other limitations" under §§ 301, 302, 306 or

307, **and** any applicable water quality standard or other requirement of State law. See also 40 C.F.R. §§ 122.44(d), 124.53. The Court stated:

> The text of [CWA § 401(d)] refers to the compliance of the applicant, not the discharge. Section 401(d) thus allows the State to impose "other limitations" on the project in general to assure compliance with various provisions of the Clean Water Act and with "any other appropriate requirement of State law." … Section 401(a)(1) identifies the category of activities subject to certification – namely those with discharges. And § 401(d) is most reasonably read as authorizing additional conditions and limitations on the activity as a whole once the threshold condition, the existence of a discharge, is satisfied.

511 U.S. at 711-12. Thus, a permit issued to a facility with a discharge must include cooling water intake limitations that satisfy not only federal technology standards, but also any applicable State water quality standards or other State law requirements.

While the above discussion indicates that a Federal Draft Permit's cooling water intake limitations must satisfy any pertinent conditions in a State § 401 certification, EPA also has an independent obligation under CWA § 301(b)(1)(C) to ensure that the intake limits in an EPA-issued permit satisfy any applicable, more stringent State requirements even if the State does not specify cooling water intake limitations in its § 401 certification. CWA § 301(b)(1)(C) provides that permit limits must achieve:

> . . . not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standards established pursuant to this chapter.

33 U.S.C. § 1311(b)(1)(C).

Although the general heading of CWA § 301 is "Effluent Limitations," the language of § 301(b)(1)(C) is not limited strictly to effluent discharge limitations. The provision also uses the term "limitations" **without** the modifying term "effluent." This distinguishes CWA § 301(b)(1)(C) from other subsections of § 301. The provision also states that permit limits must satisfy State water quality standards or other State law requirements without limiting this requirement to "effluent limitations." Furthermore, as discussed above, CWA § 316(b) requirements have been held by the federal courts to be "other limitations" adopted under §§ 301 and 306. In addition, as also discussed above, the Supreme Court has made clear that water quality standards can address more than solely discharge conditions and be enforceable through the § 401 certification process. It would be anomalous for EPA to have an independent responsibility under § 301(b)(1)(C) to ensure that effluent-related Draft Permit conditions satisfy State standards, but not to have the same obligation to ensure that cooling water intake permit conditions satisfy applicable State standards. Cf. *Virginia Electric*, 566 F.2d at 450 ("the regulations issued under § 316(b) are so closely related to the effluent limitations and new source standards of performance of §§ 301 and 306 that we think it would be anomalous to have their review bifurcated between different courts").

Finally, with respect to State water quality requirements, the Supreme Court also made clear in PUD No. 1, 511 U.S. at 713-19, that narrative provisions related to designated uses that are included in a State's water quality standards may be enforced through permit conditions. Id. Therefore, cooling water intake

limitations must satisfy these aspects of State water quality requirements, in addition to any applicable numeric criteria.

As discussed above, Rhode Island is a "downstream affected state" relative to BPS. As such, it does not have a certification role under § 401. Nevertheless, as also discussed above, CWA § 401(a)(2) dictates that EPA, as the permitting agency, must include permit conditions necessary to ensure compliance with applicable Rhode Island water quality requirements and may not issue the permit if the imposition of permit conditions will not ensure such compliance. 33 U.S.C. § 1341(a)(2). Therefore, EPA must make sure that the cooling water intake limitations in the BPS permit will ensure compliance with Rhode Island's applicable water quality requirements.

As explained in § 5.2 of EPA's July 22, 2002 Determinations Document, EPA **generally** defers to a State's application or interpretation of its own water quality standards and other State law requirements. At the same time, however, EPA must meet its independent obligation to ensure that State requirements are satisfied as dictated by CWA §§ 301(b)(1)(C) and 401(a)(2). Therefore, EPA must independently assess the question as well as consider the State's views on the subject.

V. Thermal Discharges, State Water Quality Requirements and CWA § 316(a) Variances.

EPA has interpreted CWA § 316(a) to authorize thermal discharge limitations based on a variance from both Federal technology standards and State water quality requirements. The interaction of CWA § 316(a) with the statute's requirements for compliance with State water quality requirements is discussed in EPA's July 22, 2002, Permit Determinations Document in Chapters 5 and 6, but more discussion is warranted in response to comments received on the Draft Permit.

The permittee has argued at some length in its comments that where EPA proposes to issue an NPDES permit with thermal discharge limits based on a CWA § 316(a) variance, States have no authority based on State law requirements to deny certification or impose more stringent thermal discharge conditions in § 401 certification. EPA has carefully considered the permittee's arguments and disagrees that the issue is settled in the manner argued by the permittee. Indeed, the Agency believes a number of arguments tend to support a contrary conclusion. However, EPA has also concluded that there is no need to resolve this issue for the BPS permit and, therefore, it declines to do so. The bottom line in this case is that, as discussed below, there is no conflict between the CWA § 316(a) variance-based thermal discharge limits proposed by EPA and any State certification requirements under CWA § 401 because Massachusetts has issued a CWA § 401(a)(1) certification for the permit, including its § 316(a) variance-based limits.

Thus, while there are many points that could be made here regarding how to interpret the CWA and how to deal with the possible conflict between §§ 316(a), 401 and 510, EPA does not need to decide the question here because there is no conflict at hand. In the instant case, EPA has decided to issue a CWA § 316(a) variance, and Massachusetts has issued a CWA § 401 certification for the permit and has not proposed any more stringent thermal discharge conditions. Therefore, EPA can issue the permit in full compliance with CWA §§ 316(a), 401(a)(1) and 401(d). Moreover, the State of Rhode Island has not objected to the permit's thermal discharge standards.

VI. Massachusetts Water Quality Standards Applied.

A. Thermal Discharge.

EPA has based its thermal discharge limitations on a CWA § 316(a) variance. These limitations supplant the more stringent limitations that would have otherwise applied based on applicable Federal technology standards and State water quality standards.

Before making its variance determination, EPA determined the thermal discharge limitations that would have applied under the applicable Federal technology standard (i.e., BAT) and applicable Massachusetts water quality standards. State water quality-based limitations must satisfy applicable designated uses and numeric and narrative criteria for the waterbody in question. In this case, EPA determined that water quality-based limits would have been based on the mixing zone analysis provided by the Commonwealth of Massachusetts and presented as Appendix A to EPA's July 22, 2002, Permit Determinations Document. The technology-based and water quality-based evaluations are discussed in Chapters 4 and 5 of EPA's July 22, 2002, Permit Determinations Document, respectively, as well as in Chapter 8 and elsewhere in this document.

It is apparent from this work that the thermal discharge limitations based on technology standards would have been fairly similar to those based on water quality standards. Both would have required substantial reductions in thermal discharge, and each was more stringent than the other under certain circumstances. Under CWA § 301, a permit is governed by whichever is the more stringent between technology-based and water quality-based limitations. Therefore, in the absence of a § 316(a) variance, permit limitations would have been designed based on both sets of requirements to ensure that the most stringent conditions would be satisfied at all times. It is worth noting that the water quality-based limitations derived from the State's mixing zone evaluation, consistent with the State's regulations and mixing zone policy, would have mandated **no thermal discharge** at certain times in order to ensure adequate zones of passage for migrating fish.

Ultimately, however, EPA determined that somewhat less stringent thermal discharge limitations could be imposed while still meeting the environmental standard of CWA § 316(a). In other words, EPA determined that somewhat less stringent thermal discharge limits "will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on . . . [the receiving] water." 33 U.S.C. § 1326(a). Therefore, EPA issued the Draft Permit with thermal discharge limitations based on a variance under CWA § 316(a) and issues the Final Permit on the same basis.

The relevant Massachusetts portions of the Mount Hope Bay estuary are either designated as SA or SB waters. Designated uses for the SA portions include providing "excellent habitat for fish, other aquatic life and wildlife" and a resource for "primary and secondary contact recreation," while designated uses for the SB portions include providing "a habitat for fish, other aquatic life and wildlife" and a resource for "primary and secondary contact recreation." 314 CMR 4.05(4)(a) and (b). Permit limitations subject to these standards must protect these designated uses. 314 CMR 4.05(1).[2]

The State's water quality standards also impose various numeric temperature criteria for both SA and SB waters. 314 CMR 4.05(4)(a)(2)(a.) and 4.05(4)(b)(2)(a). However, the standards for both SA and SB waters further provide that "any determinations concerning thermal discharge limitations in accordance with 33 U.S.C. 1251 § 316(a) will be considered site-specific limitations in compliance with 314 CMR 4.00." 314 CMR 4.05(4)(a)(2)(c) and 4.05(4)(b)(2)(c).

Under its CWA § 401(a)(1) certification review, the MA DEP reviewed and evaluated EPA's proposed NPDES permit and the various determinations that support it, including the CWA § 316(a) variance determination. MA DEP has concurred with EPA's CWA § 316(a) variance determination and, therefore, has certified the permit under CWA § 401(a)(1) as satisfying State requirements. The State's certification does not impose any conditions more stringent than or otherwise inconsistent with the proposed permit's thermal discharge conditions. See September 24, 2003, MA DEP CWA § 401(a)(1) Certification Letter. Based on EPA's own analysis and its consideration of MA DEP's water quality analysis, EPA agrees with

[2] The designated use for primary and secondary contact recreation includes recreational fishing.

MA DEP's conclusions. Therefore, EPA concludes that the permit's thermal discharge limits comply not only with the requirements of CWA § 316(a), but also with any applicable requirements of CWA §§ 401(a)(1), 401(d) and 301(b)(1)(C).

B. Cooling Water Intake Requirements.

As discussed in Chapters 7 and 8 of EPA's July 22, 2002, Permit Determinations Document and elsewhere in this document, EPA has developed cooling water intake limitations that the Agency has determined satisfy CWA § 316(b). As discussed in § 7.2.9 and Appendix A (cover letter) of EPA's July 22, 2002, Permit Determinations Document and above, the permit's cooling water intake limitations also must satisfy Massachusetts water quality standards, including designated uses. See also Chapter 5 and Appendix A of EPA's July 22, 2002, Permit Determinations Document and 314 CMR 4.05(1).

The Massachusetts portions of the Mount Hope Bay estuary affected by the adverse environmental impact of BPS's cooling water intake structures are classified as either SA or SB waters. As discussed above, under the Massachusetts water quality standards SA waters are, among other things, "designated as an excellent habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation," while SB waters are, among other things, "designated as a habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation." 314 CMR 4.05(4)(a) and (b).

EPA draws three conclusions related to permit conditions for the BPS cooling water intake structures and the consistency of these conditions with Massachusetts water quality standards. First, EPA concludes that the designated uses for fish habitat and recreational fishing for the Massachusetts SA and SB portions of the Mount Hope Bay estuary (including the Lee and Taunton Rivers) are not currently being attained owing in part to entrainment and impingement of organisms by BPS's withdrawals of water from the estuary for cooling.[3] Second, EPA concludes that the cooling water intake limitations proposed in the new NPDES permit for BPS will remove the plant's interference with the attainment of the SA and SB designated uses for the source waters of the Mount Hope Bay estuary. Third, EPA determines that any significantly less stringent intake limitations **would** likely interfere with attaining these uses and, therefore, the Agency cannot issue a permit with significantly less stringent intake limits as a matter of State water quality requirements under CWA § 301(b)(1)(C). These three conclusions are discussed below.

EPA concludes based on current information that the existing intake-related permit conditions for BPS do not comply with Massachusetts water quality standards. Under the facts of this case, it is inconsistent with providing either "excellent" fish habitat (SA waters) or an otherwise healthful "fish habitat"[4] (SB waters) to have a CWIS located in the waterbody that withdraws and kills trillions of organisms–including fish eggs, fish larvae, and juvenile and adult fish–from the waterbody. This is so when the entrainment and impingement losses are contributing to the much diminished, unhealthful state of the overall community

[3] As discussed above, EPA recognizes that some recreational fishing presently occurs in the Massachusetts portions of Mount Hope Bay. However, the State has had to impose strict fishing restrictions for some species due to depleted fish populations. Entrainment and impingement of organisms by the BPS cooling water intake structures has contributed to the depletion of these populations and the resulting need to restrict recreational fishing.

[4] EPA recognizes that the Massachusetts SB standards refer to the designated use as provision of "a fish habitat" and do not expressly state that the habitat must be healthful. EPA also recognizes that the language of the SB standard is distinct from the SA standard which refers to "excellent fish habitat." Nevertheless, the Agency concludes it to be a proper interpretation of the State's standards that the SB fish habitat must be healthful and of at least somewhat high quality given the provisions of 314 CMR 4.01(4) and 314 CMR 4.05(1) and given the terms of the State's water quality analysis in Appendix A of EPA's July 22, 2002, Permit Determinations Document.

of organisms in the waterbody and these losses remove a significant percentage of the local populations of certain species of fish (e.g., winter flounder).

EPA notes that when fish are taken from the bay for fishing, it is generally compatible with the designated use because the resource is supposed to be managed to provide the beneficial use of fishing. Losing important numbers of the organisms for power plant cooling, however, is not compatible with the designated beneficial uses of the resource, at least under the facts of this case. See 314 CMR 4.05(1) ("Surface waters . . . shall be regulated to protect and enhance the designated uses."); 314 CMR 4.01(4). Fishing has had to be severely restricted in Mount Hope Bay because of depressed fish populations, and it is important from a water quality standards perspective to try to design a permit that will help enhance the resource's availability for fishing once more. In this regard, EPA again notes that steps are being taken to address other issues that might also be affecting Mount Hope Bay's ecology, ranging from the imposition of fishing restrictions to the improved control of water pollution discharges from the City of Fall River.

EPA concludes that the cooling water intake limitations proposed in the NPDES permit for BPS will satisfy the SA and SB designated uses for the source waters of the Mount Hope Bay estuary. There are several reasons for this conclusion. The permit limits will reduce intake flow by approximately 96 percent, and this will reduce the entrainment and impingement of aquatic organisms by the BPS CWIS by approximately the same percentage. Some commenters have complained that the intake flow of 56 MGD that is associated with the technology-based intake limits is still substantial and will result in a significant percentage loss of the Mount Hope Bay winter flounder population (approximately 26 percent) and other species. EPA agrees that this loss is significant and that if sustained on a continuous basis, it might well be inconsistent with meeting the State's designated uses for Mount Hope Bay. EPA believes, however, that the reductions in entrainment and impingement required by the new intake limits in the permit (along with other steps such as permit-mandated thermal discharge reductions and fishing restrictions) will help facilitate a recovery of the bay's winter flounder populations and its overall biological community. As this recovery develops, the percentage of the winter flounder population being lost to the intake will decline substantially. Obviously, EPA's assessment in this regard will need to be revisited in future permit renewals.

Another factor considered by EPA is that under the new permit, the power plant would use only the intake on the Lee River under most conditions. Although the Lee River side of the bay is designated SA whereas the Taunton River side of the bay (where the other BPS intake is located) is designated SB, EPA concludes the stated approach makes environmental sense. This is because it appears that the Taunton River intake might pose a relatively greater threat to winter flounder. Unfortunately both intakes impact spawning/nursery areas for winter flounder, but the Taunton River intake appears to be more of a threat. This is because one of the few sampling sites that has yielded winter flounder in recent years is located in the relatively deep water (for the Mount Hope Bay estuary) in the Taunton River channel near the intake. This appears to have resulted in the Taunton River intake impinging more winter flounder than the Lee River intake. The Taunton River also has among the largest anadromous fish runs in the Commonwealth, so removing the threat to anadromous fish from the intake should be positive for fish habitat quality.

In addition, the Taunton River intake has been the site of numerous "unusual fish impingement events" in recent years. While it is not clear why these events have been occurring with greater regularity at this intake, two possible theories involve factors peculiar to the Taunton River intake. One has to do with the shape of the coastline as it moves away from the point and cuts in toward the intake, while the other has to do with a possible effect of the large vessels that transit the Taunton River channel and unload coal at BPS. The idea is that one or both of these factors may have a tendency to direct fish toward the intake. Once they get too close, they cannot escape and are impinged. If either of these factors are contributing to these impingement events, then discontinuing use of the Taunton River intake would improve habitat quality. Finally, as has been noted previously, the Lee River intake was constructed more recently and

uses angled traveling screens as opposed to flush-mounted screens. Angled traveling screens reputedly tend to impinge fewer fish, though there has been some dispute about this in the record.

Finally, EPA also concludes that any significantly less stringent intake limitations would not comply with the designated uses under the applicable Massachusetts water quality standards and, therefore, may not be issued as a matter of State water quality requirements under CWA § 301(b)(1)(C). EPA acknowledges that some **small** changes might be possible without running afoul of the State's water quality standards, but EPA believes that any significant increase to intake flow would not be acceptable. This is because significantly greater intake flow would result in degraded habitat quality since significantly greater numbers of marine organisms would be killed or injured by entrainment and impingement by the power plant's cooling water intake. In addition, EPA believes that such losses would prevent, significantly delay, or interfere with the recovery of local fish populations. EPA concludes that permit conditions that caused or contributed to such a result would be inconsistent with the State's water quality standards. Thus, while the permit's limits are based on Federal technology standards under CWA § 316(b), EPA believes that these limits could not be made significantly less stringent as a matter of State water quality requirements.

As mentioned above, the MA DEP has certified the conditions of the new NPDES permit for BPS and has not added any additional more stringent permit conditions. MA DEP's certification states that the permit's cooling water intake limitations adequately address entrainment and impingement impacts and will allow for the attainment of the designated uses of Mount Hope Bay in the State's water quality standards. Therefore, EPA has determined that the permit's intake limitations comply with CWA §§316(b), 401(a)(1), 401(d) and 301(b)(1)(C).

VII. Rhode Island Water Quality Standards Applied.

EPA discusses the need to consider Rhode Island water quality standards under CWA § 401(a)(2) in § 5.4 of EPA's July 22, 2002, Permit Determinations Document. Because EPA determined that this permit might affect Rhode Island's water quality, EPA sent the RI DEM a notice letter regarding the Draft Permit in accordance with § 401(a)(2). See EPA's July 22, 2002, Permit Determinations Document, § 5.4; AR 719. RI DEM responded to EPA in a letter dated September 18, 2002 (AR 1152), which addresses both thermal discharge and cooling water intake permit requirements.

A. Thermal Discharge.

Rhode Island's water quality standards set designated uses and narrative and numeric criteria for the Rhode Island portions of Mount Hope Bay that are relevant to the regulation of thermal discharges. See Rhode Island Water Quality Regulations, Rules 8.A., 8.B(2), 8.D.1, and 8.D.3. In RI DEM's September 18, 2002, letter (AR 1152), the State concluded that the thermal discharge allowed by the Draft Permit **would** cause a violation of applicable numeric water quality criteria for temperature and temperature change during the periods that the permit allows the facility to operate in a once-through cooling mode (i.e., during the 122 hours of once-through operations proposed by the Draft Permit).

Of course, the thermal discharge limitations in EPA's permit are based on a CWA § 316(a) variance. As explained above, EPA presently interprets CWA § 316(a) to authorize a variance from State water quality standards-based limitations, as well as technology-based standards. EPA believes that this applies not only to the standards of the State in which the discharging facility is located, but also to a "downstream affected State" such as, in this case, Rhode Island. There is also no requirement that EPA obtain a certification of the permit from the downstream State before issuing the permit, and that State cannot prohibit issuance of the permit or veto it (though it may appeal a permit like any other interested party).

Because EPA has concluded that the thermal discharge limitations satisfy the conditions of CWA § 316(a), the Agency has concluded that it may issue the permit despite the problem noted by the State. EPA further notes, however, that the RI DEM accepts EPA's determination under § 316(a) since it states in its letter that, "[h]aving reviewed all available information, . . . the Rhode Island DEM does not object to the issuance of the permit with the proposed CWA Section 316(a) . . . variance." AR 1152. The State goes on to "request that EPA consider" several potential additional limitations or restrictions on the conditions under which BPS would be permitted to use the 122 hours of once-through cooling operations. EPA has considered the State's proposals and has agreed to add the restriction that such once-through cooling is precluded during the winter flounder spawning season. This is more of a cooling water intake issue, however, rather than a thermal discharge issue. EPA decided not to add the other requirements that are geared toward additional thermal discharge restrictions on the grounds that we believe the thermal discharge limitations as designed should satisfy the standard of CWA § 316(a), and that the relatively small number of temporary, intermittent once-through cooling hours being allowed should not change that result.

B. Cooling Water Intake Requirements.

Rhode Island's water quality standards also apply to the NPDES permit's cooling water intake limitations. Specifically, the designated uses and narrative criteria for SA and SB waters apply because the BPS intake affects Rhode Island waters in Mount Hope Bay and Narragansett Bay that are subject to those classifications. See AR 1152 and Rhode Island Water Quality Regulations, Rules 6, 8.A, 8.B, 8.D, and 9.A. See also *Id.* Rules 1 and 4. EPA previously determined that the cooling water intake limitations proposed in the Draft Permit for BPS would satisfy the technology standards in CWA § 316(b), see EPA July 22, 2002, Permit Determinations Document at Ch. 7 and 8, and would also likely satisfy Rhode Island's water quality standards. See Id. at § 7.2.9 and AR 719 (July 15, 2002, EPA letter to RI DEM).

In its September 18, 2002, letter, however, the State concluded that the entrainment and impingement that would occur during the 122 hours of once-through cooling operations allowed by the permit would "violate the general criteria for the protection of aquatic life specified in Rule 8.D.1." See also Rhode Island Water Quality Regulations, Rule 9.A. Nevertheless, the RI DEM also stated in its letter that "[h]aving reviewed all available information, . . . the Rhode Island DEM does not object to the issuance of the permit with the proposed CWA Section . . . 316(b) variance." AR 1152. The State then went on to "request that EPA consider . . ." several potential additional limitations or restrictions on the conditions under which BPS would be permitted to utilize the 122 hours of thermal discharges on a once-through cooling basis.

At the outset, EPA wishes to clarify that unlike CWA § 316(a), CWA § 316(b) is not a "variance" provision and does not authorize a "variance" from State requirements. Nevertheless, the State indicated that, in light of all the information before it, the State did not object to the permit but, instead, asked that EPA consider certain additional permit conditions. EPA has considered the State's proposals and, showing appropriate deference to the State's interpretation of its own standards, it has decided to adopt the State's suggestion that the permit prohibit any once-through cooling operations during the winter flounder spawning season (February through May). Among the conditions suggested by the State, this is the one that the Agency felt would most significantly further minimize the adverse environmental impacts of the BPS cooling water intake to meet State water quality standards. With this additional restriction, EPA concludes that the permit's intake limitations will satisfy not only CWA § 316(b), but also Rhode Island's water quality standards and CWA §§ 401(a)(2) and 301(b)(1)(C).

10. Comment

One commenter noted that EPA must apply Rhode Island water quality standards to its 316(b) determination and that the RI DEM has determined that the reductions in flow proposed in the Draft

Permit are the "minimum necessary" to ensure the protection of aquatic life. The commenter pointed out that Rhode Island water quality standards provide that any activity must not "adversely affect" the propagation or the composition of fish and wildlife and must also give specific protection to habitat integrity. (1133)

Response
These comments are addressed above and elsewhere in this document.

11. Comment
One commenter pointed out that Mount Hope Bay is a resource "held in trust for the benefit of the public" and governed by both Federal and State law. The commenter noted that EPA is "obligated to prevent further degradation of this resource" and to confirm the Draft Permit limits it established under 316(a) and (b) to meet Rhode Island and Massachusetts water quality standards. (1133)

Response
While EPA generally agrees with the commenter that the estuarine ecosystem of Mount Hope Bay is a natural resource held in trust by the Federal and State governments on behalf of the public, EPA also believes that its NPDES permit decision regarding BPS is governed by application of the Federal CWA. As discussed in EPA's July 22, 2002, Permit Determinations Document as well as in this document, EPA believes its permit determinations in this case comply with the CWA and, therefore, satisfy its legal obligation with respect to protecting Mount Hope Bay. With respect to State water quality standards specifically, EPA has discussed above the manner in which water quality standards apply to thermal discharge and cooling water intake requirements in this permit.